

CLAIMS

I claim:

1. A furnace comprising:

5 a furnace enclosure housing enclosing a vertical rotating means for vertically rotating inside said enclosure housing.
2. The furnace of claim 1 further comprising:

10 a heating means disposing at a bottom portion of said furnace enclosure housing.
3. The furnace of claim 1 further comprising:

15 a plurality of trays attached to said vertical rotating means for vertically rotating with said vertical rotating means.
4. The furnace of claim 1 further comprising:

20 an attaching means for attaching said plurality of trays to said vertical rotating means for maintaining said trays oriented along a vertical position when said trays vertically rotating with said vertical rotating means.
- 25 5. The furnace of claim 1 further comprising:

a plurality of trays attached to said vertical rotating means for vertically rotating with said vertical rotating means wherein said trays carrying electronic manufacturing items.

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6. The furnace of claim 1 further comprising:

35 a plurality of trays attached to said vertical rotating means for vertically rotating with said vertical rotating means wherein said trays carrying food processing items.

7. The furnace of claim 1 further comprising:

5 a plurality of trays attached to said vertical rotating means
for vertically rotating with said vertical rotating means
wherein said trays carrying medical processing items.

8. The furnace of claim 1 wherein:

10 said vertically rotating means further comprising a pair of
rotating chains and a corresponding pair of stationary rings.

9. The furnace of claim 1 wherein:

15 said vertically rotating means further comprising a pair of
rotating rings and a corresponding pair of stationary rings.

10. The furnace of claim 1 wherein:

20 said vertically rotating means further comprising a pair of
ellipse-shaped rotating chains of and a corresponding pair of
ellipse-shaped stationary rings.

11. The furnace of claim 1 wherein:

25 said vertically rotating means further comprising a pair of
rotating chains and a corresponding pair of stationary rings
disposed at a distance below said rotating chains; and

30 said furnace further includes a plurality of trays wherein
each of said trays having an apex attached to said pair of
rotating chains and a base attached to said pair of stationary
rings for vertically rotating with said vertically rotating
chains while maintaining said base for each of said tray
continuous oriented along a horizontal direction.

12. The furnace of claim 1 wherein:

5 said vertically rotating means further comprising a pair of rotating rings and a corresponding pair of stationary rings disposed at a distance below said rotating rings; and

10 said furnace further includes a plurality of trays wherein each of said trays having an apex attached to said pair of rotating rings and a base attached to said pair of stationary rings for vertically rotating with said vertically rotating rings while maintaining said base for each of said tray continuous oriented along a horizontal direction.

12. The furnace of claim 1 wherein:

15 said vertically rotating means further comprising a pair of ellipse-shaped rotating chains and a corresponding pair of ellipse-shaped stationary rings disposed at a distance below said ellipse-shaped rotating rings; and

20 said furnace further includes a plurality of trays wherein each of said trays having an apex attached to said pair of ellipse-shaped rotating chains and a base attached to said pair of ellipse-shaped stationary rings for vertically rotating with said ellipse-shaped vertically rotating chains while maintaining said base for each of said tray continuous oriented along a horizontal direction.

13. The furnace of claim 1 wherein:

30 said enclosing housing further includes an opening near a bottom portion of said enclosure housing for loading and unloading manufacturing items in and out of said furnace.

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14. The furnace of claim 1 further comprising:
- a rotating motor for driving said vertically rotating means to rotate along a vertical direction inside said enclosure housing.
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15. The furnace of claim 1 further comprising:
- a heat exchanger for adjusting a temperature inside said enclosure housing.
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16. The furnace of claim 1 further comprising:
- a manufacturing processing material for processing a manufacturing item processed by said furnace.
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17. The furnace of claim 1 further comprising:
- a flux pot and a wave soldering material for processing an electronic manufacturing item using said furnace.
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18. The furnace of claim 1 further comprising:
- a sterilizing agent for processing a medical processing item using said furnace.
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19. The furnace of claim 1 further comprising:
- a food-processing agent for processing a food processing item using said furnace.
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20. A method of carrying out a processing step comprising:
- rotating a processing item inside a furnace along a vertical direction for carrying out said processing step using said furnace.